

### REMARKS

The rejections of Claims 1, 2, 5-7, 11, 17, 18, 22, 23, and 25 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over, and of Claims 1, 4-6, 9, 11, 17, 20, 22, 23, and 25 under 35 U.S.C. § 103(a) as obvious over, U.S. 5,827,632 (Inaba '632), "as evidenced by applicants' admission in the instant specification at page 37, lines 11-22, and the tables at page 115, embodiment 7, and the accompanying text (applicants' admissions I)" and Grant & Hackh's Chemical Dictionary, 5<sup>th</sup> edition, page 357 (Dictionary), are respectfully traversed.<sup>1</sup>

Inaba '632 discloses a toner for developing electrostatic images comprising toner particles having a weight-average particle size of 1-9  $\mu\text{m}$ , hydrophobized inorganic fine powder having an average particle size of 10-90 nm (external additive) (the Examiner relies on example (a-1) therein), and hydrophobized silicon compound fine powder (the Examiner relies on example (A) therein) having an average particle size of 30-120 nm and a specifically described broad particle size distribution (column 3, lines 31-42). Inaba '632 discloses further that for improved toner transferability, their toner particles preferably have a shape factor SF-1 of 100-150, more preferably 100-125, further preferably 100-110, and a shape factor SF-2 of 100-140, more preferably 100-130, further preferably 100-125, and that as the shape factors SF-1 and SF-2 approach 100, the external additive added to the toner particles is liable to be embedded at the toner particle surfaces, thus reducing its addition effect, but by adding the above-discussed hydrophobized silicon compound fine powder having a specific particle size distribution, it becomes possible to effectively suppress the deterioration of additives, such as a flowability improver, externally added to the toner particles (column 7, lines 43-56). The Examiner relies on Example 7 therein, which describes a cyan toner and which the Examiner finds meets the presently-recited SF-1, SF-2, and toner particle size

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<sup>1</sup> It appears that the rejection stated at paragraph 15 of the Office Action may be redundant, in view of the rejection at paragraph 13 of the Office Action, although there seems to be some inconsistency in the listed claims under rejection.

limitations, also relying on Dictionary to find that the disclosure of weight-average particle size of 7.7  $\mu\text{m}$  in said Example 7 means that particles having a diameter of less than or equal to 7 are present. Recognizing that Inaba '632 discloses nothing with regard to degree of roundness of their silicon compound fine powder (A), the Examiner relies on Applicants' specification describing the disadvantages when the presently-recited degree of roundness is outside the recited range, coupled with presently-disclosed Embodiment 7. Embodiment 7 is described as a developer having the inorganic fine particle 4 added to Toner 5, as described in the specification at page 113, lines 13-15, wherein Toner 5, when a cyan toner, has an SF-1 of 111 and an SF-2 of 136, as described in the specification in the table at page 112, and wherein inorganic fine particle 4 has an average particle diameter of 120 nm and an average degree of roundness of 0.990, as described in the specification at page 104, lines 19-21. The Examiner finds that the developer in Example 7 of Inaba '632 exhibits properties sought by Applicants, and because said Example 7 appears to exhibit the properties sought by Applicants, "it is reasonable to presume" that the silicon compound fine powder (A) of Inaba '632 meets the average roundness limitations of the present claims.

In reply, the Examiner's finding is **not** reasonable. First of all, Applicants describe in the specification herein various comparative examples that fall within the terms of Inaba '632, yet are deficient in at least one of the evaluated properties described in the specification beginning at page 97, line 15. For example, Comparative Example 2, which uses Toner 6, employs toners meeting the SF-1 and SF-2 requirements of Inaba '632 yet is deficient with regard to the cleaning property, burial of additive property and background stain properties, as shown in the table at page 115 of the specification. Second, any improved results described in Inaba '632 could be, and likely are, at least in part, due to the inventive particle size distribution of their silicon compound fine powder (A) combined with the presence of their hydrophobized inorganic fine powder, rather than any degree of roundness of their

silicon compound fine powder, especially since various of the comparative examples therein that differ with regard to these components are disclosed as providing inferior results. Third, the base toner herein requires a volume average particle diameter of 2 to 8  $\mu\text{m}$ , while Example 7 of Inaba '632 describes a weight-average particle size of 7.7  $\mu\text{m}$ . Fourth, other examples of Inaba '632 do not meet the SF-1 and SF-2 limitations of the present claims, such as Examples 1-6 and 8-10, yet are described as producing results similar to that of Example 7.

Nor for purposes of “applicants’ admissions I” is it proper for the Examiner to equate qualitative expressions of results, such as “good” cleaning property and toner transfer rate, between the specification herein, and the prior art, to find that means to obtain the results are quantitatively the same, such as particular degree of roundness range.

Nor is it proper for the Examiner to use Applicants’ own comparative data, which is not prior art, against them.

In sum, Inaba '632 does not recognize any connection between the SF-1, SF-2, and degree of roundness properties and the improved properties obtained by the present invention.

For all the above reasons, it is respectfully requested that these rejections be withdrawn.

The rejections of Claims 12, 13, and 24, and of Claims 12, 15, and 24, under 35 U.S.C. § 103(a) as unpatentable over U.S. 2003/0118366 (Nukada et al) combined with Inaba '632, as evidenced by applicants’ admissions I and Dictionary, are respectfully traversed.<sup>2</sup> Nukada et al does not remedy any of the above-discussed deficiencies of Inaba '632.

Accordingly, it is respectfully requested that these rejections be withdrawn.

The rejection of Claims 1-5, 17-20, 22 and 25 under 35 U.S.C. § 103(a) as unpatentable over U.S. 5,712,072 (Inaba '072), as evidenced by Dictionary, combined with

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<sup>2</sup> It appears that the rejection stated at paragraph 16 of the Office Action may be redundant, in view of the rejection at paragraph 14 of the Office Action, although Claim 13 is listed in paragraph 14 and Claim 15 is listed in paragraph 16.

U.S. 6,403,271 (Suzuki et al), as evidenced by applicants' admissions I, is respectfully traversed.

Inaba '072 relates to a toner for developing an electrostatic image, comprising toner particles containing a binding resin composed of a styrene homopolymer or copolymer, a coloring agent, a polar resin, and a specified solid ester wax (column 3, line 37ff). Inaba '072 discloses further that their toner preferably has a shape factor SF-1 of 100 to 160, and especially 100 to 150 (column 13, lines 8-9), and preferably a shape factor SF-2 of 100 to 130 (column 13, lines 46-49). Inaba '072 discloses further that it is preferred that their toner have a weight-average diameter of 3 to 8  $\mu\text{m}$  (column 13, lines 63-66). The Examiner relies on Example 9 therein, which is described as a cyan toner having a weight-average particle size of 6.3  $\mu\text{m}$ , an SF-1 of 115 and an SF-2 of 120 (Table 3 at columns 19-20). Applicants note that said Example 9 is the **only** example in Inaba '072 that meets the presently-recited SF-2 limitation.

Recognizing that Inaba '072 does not disclose the particular inorganic fine particles of the present claims, the Examiner finds that Inaba '072 discloses the addition of any flowability improving agent, such as silica (column 14, lines 41-42), and thus relies on Suzuki et al for their disclosure of such inorganic fine particles. Suzuki et al's inorganic fine particle is described as monodisperse spherical inorganic oxide having a true specific gravity of from 1.3 to 1.9 and a volume average particle diameter of from 80 to 300 nm (column 5, lines 2-5). The Examiner specifically relies on monodisperse spherical silica B therein, disclosed as having, *inter alia*, a spherical degree of 0.90 and a volume average particle diameter of 80nm with a standard deviation of 13nm (column 17, lines 35-40) and Example 2, which uses said silica B. (The Examiner cites Table 5 at column 35 of Suzuki et al; no such Table or column exists.)

Recognizing that Suzuki et al does not disclose the presently-recited average degree of roundness for their inorganic fine particles, the Examiner relies on the above-discussed applicants' admissions I to find that the properties sought by Suzuki et al are the same properties sought by Applicants, thus finding that Suzuki et al's inorganic fine particles meet the presently-recited degree of roundness limitation.

In reply, the Examiner's finding is **not** reasonable. What was stated above with regard to the Examiner's reliance on Applicants' so-called admissions applies herein as well. In addition, the other examples than Example 2 of Suzuki et al, using other than monodisperse spherical silica B, are described as producing comparable results to Example 2, thus the results therein cannot be assumed to be because of degree of roundness, as opposed to the particles being monodisperse or having the requisite true specific gravity, for example. Furthermore, Applicants' superior results depend, in part, on the SF-1 and SF-2 limitations of the present claims; the SF-1 and SF-2 of Suzuki et al's toner are unknown.

In addition, why absent the present disclosure as a guide, would one select Example 9 of Inaba '072, out of all the other examples of Inaba '072, to combine with Suzuki et al? None of these other examples meet the terms of SF-2 as required herein. In addition, the comparative data in the specification show the importance of, *inter alia*, SF-2 being within the presently-recited range.

For all the above reasons, it is respectfully requested that these rejections be withdrawn.

The rejection of Claims 6-9, 11-15, 23 and 24 under 35 U.S.C. § 103(a) as unpatentable over Nukada et al combined with Inaba '072, as evidenced by Dictionary, combined with Suzuki et al, as evidenced by applicants' admissions I, is respectfully traversed. Nukada et al does not remedy any of the above-discussed deficiencies of Inaba

'072 combined with Suzuki et al. Accordingly, it is respectfully requested that this rejection be withdrawn.

The rejection of Claims 1-9, 11-15, and 17-20 under 35 U.S.C. § 112, second paragraph, as being indefinite in the recital of the term “average degree of roundness ...” is respectfully traversed. Indeed, the rejection is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that the rejection be withdrawn.

The rejection of Claims 1-9, 11-15, 17-20 and 22-25 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, is respectfully traversed. It is submitted that the rejection with regard to Claim 11 is now moot, in view of the above-discussed amendment. However, Applicants respectfully submit that the limitation “SF-1 < SF-2” is in compliance with the written description requirement.

It is irrelevant that there is no description of any advantage associated with the above limitation, or any description that there are any problems associated with not meeting this limitation. Rather, the issue is simply whether Applicants had possession of the claimed invention, with this limitation, as of the filing date. All of the examples and comparative examples described in the specification meet the above-quoted limitation. Thus, black toners 1-6, as described in the specification at page 107, line 9 through page 108, line 6, and the various color toners 1-6, as described in the table at pages 111-112, all meet the above-quoted limitation. It cannot seriously be challenged that Applicants were in possession of the presently-claimed invention, including the above-quoted limitation, as of the filing date, whether or not Applicants recognized any advantage from the limitation. *Compare In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) (term “not permanently fixed thereto” not literally disclosed held to be described by absence of disclosure of permanently fixed microcapsules); and *In re Voss*, 557 F.2d 812, 194 USPQ 267 (CCPA 1977) (term “crystalline content . . . at least 50% by weight” not literally disclosed held to be described by

literal disclosure of "glass-ceramic material" coupled with evidence that one skilled in the art would have attributed the recited crystalline content as inherent in that material).

Nevertheless, the issue is moot, since Applicants were also in possession as of the filing date of the invention without the limitation "SF-1 < SF-2", which limitation has been deleted from the claims.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The objection to various claims is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that the objection be withdrawn.

The objection to the disclosure with regard to the use of trademarks is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that the objection be withdrawn.

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

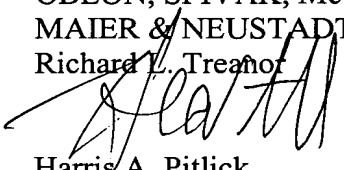
Respectfully submitted,

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